

IN THE CLAIMS

This listing of claims replaces all prior versions, and listings, in this application.

1. (previously presented) A biosensor for glucose, which comprises a glucose binding protein (GBP) and at least one reporter group attached at position 183 of said GBP, wherein binding of glucose in a glucose-binding pocket of said biosensor causes a change in signaling by said reporter group.

2. (previously presented) The biosensor according to claim 1, wherein said GBP is a W183C mutant.

Claims 3-6 (canceled)

7. (previously presented) The biosensor according to claim 1, wherein said reporter group is covalently attached at position 183 of said GBP.

8. (previously presented) The biosensor according to claim 1, wherein said reporter group is noncovalently attached at position 183 of said GBP.

9. (original) The biosensor according to claim 1, wherein said reporter group is a redox cofactor.

10. (original) The biosensor according to claim 1, wherein said reporter group is a fluorophore.

11. (previously presented) The biosensor according to claim 1, wherein said biosensor's standard intensity change (ΔI_{std}) upon binding of glucose is greater than 0.25.

12. (original) The biosensor according to claim 11, wherein said ΔI_{std} is greater than 0.9.

13. (previously presented) The biosensor according to claim 1, wherein said biosensor's maximum value of standard ratiometric change (ΔR_{\max}) upon binding of glucose is greater than 1.25.

14. (original) The biosensor according to claim 13, wherein said ΔR_{\max} is greater than 2.5.

15. (previously presented) A biosensor for glucose, which comprises a glucose binding protein (GBP) and at least one reporter group attached at one or more amino acid positions of said GBP selected from the group consisting of 10, 93 and 183, wherein binding of glucose in a glucose-binding pocket of said biosensor causes a change in signaling by said reporter group.

Claims 16-30 (canceled)

31. (previously presented) The biosensor according to claim 2, wherein at least one reporter group is acrylodan.

32. (previously presented) A biosensor for glucose, which comprises a glucose binding protein (GBP) and acrylodan covalently attached at position 183 of said GBP, wherein binding of glucose in a glucose-binding pocket of said biosensor causes a change in signaling by said reporter group.

Claims 33-37 (canceled)

38. (new) The biosensor according to claim 2, wherein said GBP is *E. coli* GBP.

39. (new) The biosensor according to claim 15, wherein said GBP is *E. coli* GBP.

40. (new) The biosensor according to claim 32, wherein said GBP is *E. coli* GBP.